

Office Action Summary

Application No.

10/755,086

Applicant(s)

LAWRENCE, DAVID S.

Examiner

CHIH-MIN KAM

Art Unit

1656

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) 70, 79, 80, 82 and 84 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49, 83, 88-94, 96-102, 122, 123, 129-131, 133, 134, 137-143, 146, 147, 149 and 150 is/are allowed.
- 6) ☒ Claim(s) 56, 67, 73-76, 86 and 87 is/are rejected.
- 7) ☒ Claim(s) 57-66, 68, 69, 71, 77, 78, 127, 128 and 148 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-52)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/10/09

- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 20090727
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims pending in the application are 49,56-71,73-78,82-84,86-94,96-102,122,123,127-131,133,134,137-143 and 146-150.

DETAILED ACTION

Status of the Claims

1. Claims 49, 56-71, 73-78, 82-84, 86-94, 96-102, 122-123, 127-131, 133-134, 137-143 and 146-150 are pending.

Applicants' amendment and supplemental amendment filed March 10 and May 12, 2009 are acknowledged. Applicants' response has been fully considered. In the amendment, claims 56, 57 and 59-62 have been amended, and new claim 148 has been added. In the supplemental amendment, claims 49, 56, 79, 80, 83, 88, 90, 92, 93, 96, 97 and 122 have been amended, claim 95 has been cancelled; and new claims 149-150 have been added. Previously withdrawn claims 92-94, 96 and 101 are rejoined with generic claim 90 for examination since the generic claim (i.e., claim 90) appears allowable. Claims 70, 79, 80, 82 and 84 are non-elected inventions and are withdrawn from consideration in this Office Action since the generic claim (i.e., claim 56) is rejected. Therefore, claims 49, 56-69, 71, 73-78, 83, 86-94, 96-102, 122-123, 127-131, 133-134, 137-143 and 146-150 are examined.

Withdrawn Claim Objections

2. The previous objection to claims 57, 88, 140 and 141 is withdrawn in view of applicants' amendment to the claim, and applicants' response at pages 187-188 in the amendment filed March 10, 2009.

Withdrawn Claim Rejections - 35 USC § 102

3. The previous rejection of claims 49, 56, 60-69, 73-78, 83, 86, 87, 123, 134 and 137-139, under 35 U.S.C. 102(b) (mistakenly as 102(b), should be 102(a)) as being anticipated by Chen *et al.* (J. Am. Chem. Soc. 124, 3840-3841 (2002), published on internet March 22, 2002), is

withdrawn in view of applicants' Declaration filed under 37 C.F.R. 1.132 on April 16, 2007, and applicants' response at page 188 in the amendment filed March 10, 2009.

4. The previous rejection of claims 49, 56-69, 71, 73-78, 83, 86-91, 95, 97-100, 102, 122, 123, 127-131, 133-134, 137-143, and 146-147, under 35 U.S.C. 102(c) as being anticipated by Nguyen *et al.* (US 2004/0166553 A1), is withdrawn in view of applicants' Declaration filed under 37 C.F.R. 1.131 on April 16, 2007, and applicants' response at page 189 in the amendment filed March 10, 2009.

New Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 56, 67, 73-76 and 86-87 are rejected under 35 U.S.C. 102(b) as anticipated by Nagai *et al.* (Nature Biotechnology 18, 313-316, March 2000; Reference 7 in the IDS filed 1/9/2004).

Nagai *et al.* teach a method for visualizing phosphorylation of proteins in living cells using a fluorescent indicator composed of two green fluorescent protein (GFP) variants (i.e., RGFP and BRGFP) joined by the kinase inducible domain (KID) of the transcription factor cyclic adenosine monophosphate (cAMP)-responsive element binding protein (CREB), where KID sequence is ART (TSSEILSRPSYRKILNDLSSDT; Fig. 1) or Kempart (TSLRRASLGTGHAVRAIGRLSST; Fig. 1) and where phosphorylation of KID by the cAMP-dependent protein kinase A (PKA) decreased the fluorescence resonance energy transfer (FRET)

among the flanking GFPs (Fig. 2; abstract; page 313, right column; page 314; claims 56 (i, ii, iii), 67, 73-76 and 86-87).

Claim Objections

6. Claims 57-66, 68, 69, 71, 77-78, 127-128 and 148 are objected to because the claims are dependent from a rejected claim.

Conclusion

7. Claims 56, 67, 73-76 and 86-87 are rejected; and claims 57-66, 68, 69, 71, 77-78, 127-128 and 148 are objected to. It appears claims 49, 83, 88-94, 96-102, 122, 123, 129-131, 133, 134, 137-143, 146, 147, 149 and 150 are free of art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Min Kam whose telephone number is (571) 272-0948. The examiner can normally be reached on 8.00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached at 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Chih-Min Kam/

Primary Examiner, Art Unit 1656

CMK

July 27, 2009